

Washington Park Arboretum

BULLETIN



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Winter 2020

The “Washington Park Arboretum Bulletin” is a benefit of Arboretum Foundation membership. For information on membership or advertising opportunities, contact the Arboretum Foundation at 206-325-4510 or info@arboretumfoundation.org.

— Washington Park Arboretum —

The Arboretum is a 230-acre dynamic garden of trees and shrubs, displaying internationally renowned collections of oaks, conifers, camellias, Japanese and other maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle’s largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington Botanic Gardens and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

— Arboretum Foundation —

The Arboretum Foundation’s mission is to create and strengthen an engaged community of donors, volunteers and advocates who will promote, protect and enhance the Washington Park Arboretum for current and future generations.

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The University of Washington manages the Arboretum’s collections, horticultural programs, facilities and education programs through the University of Washington Botanic Gardens. It owns some of the land and buildings and all of the collections.

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The City of Seattle owns most of the Arboretum’s land and buildings. Seattle Parks and Recreation is responsible for park functions throughout the Arboretum. It also manages the 3.5-acre Seattle Japanese Garden within the Arboretum, in partnership with the Arboretum Foundation.

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— Washington Park Arboretum Bulletin —

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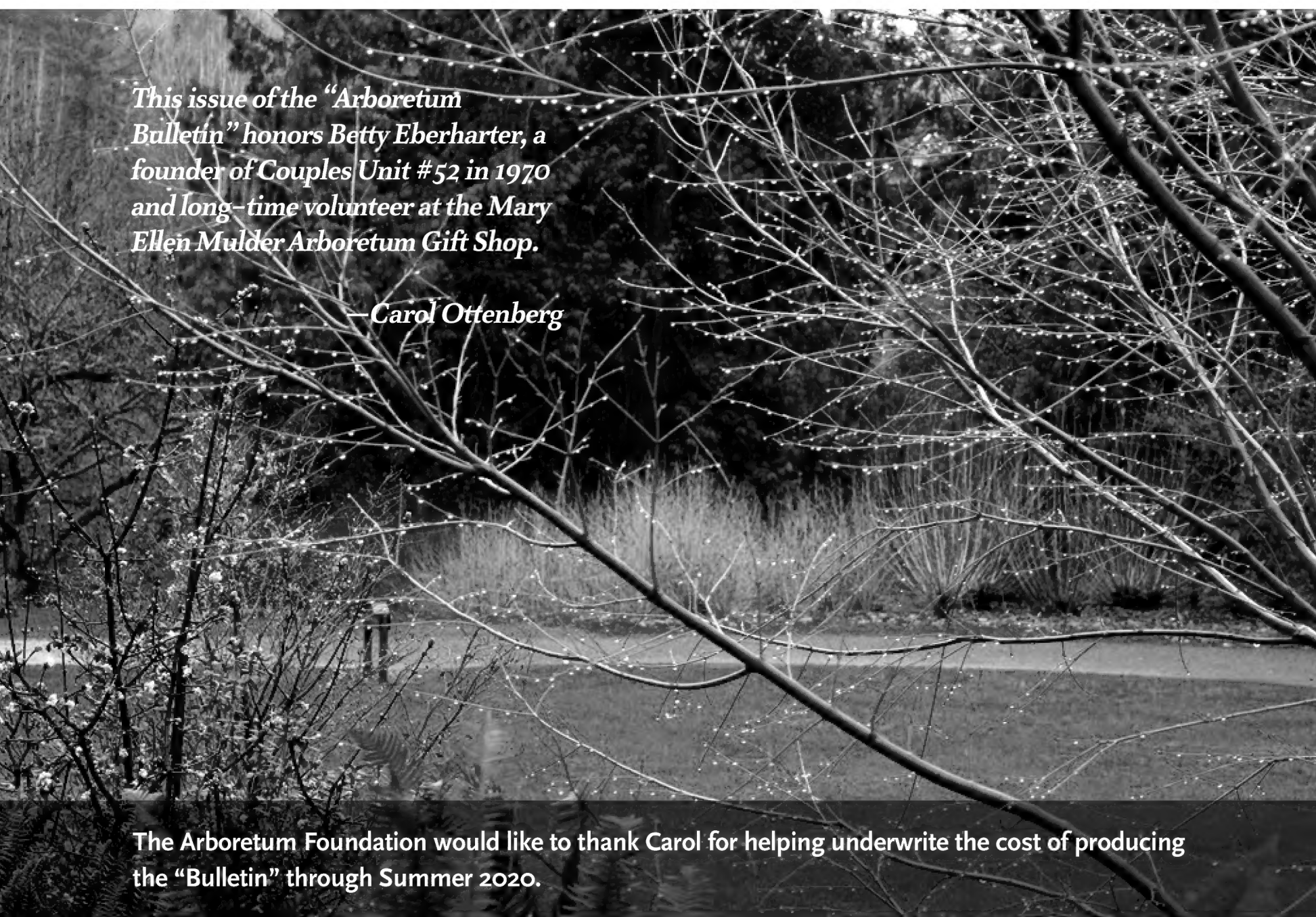
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This issue of the “Arboretum Bulletin” honors Betty Eberharter, a founder of Couples Unit #52 in 1970 and long-time volunteer at the Mary Ellen Mulder Arboretum Gift Shop.

—Carol Ottenberg

The Arboretum Foundation would like to thank Carol for helping underwrite the cost of producing the “Bulletin” through Summer 2020.

ON THE COVER: *Camellia x vernalis* ‘Kokinran’ blooming in the Witt Winter Garden in mid-January. (Photo by Niall Dunne)

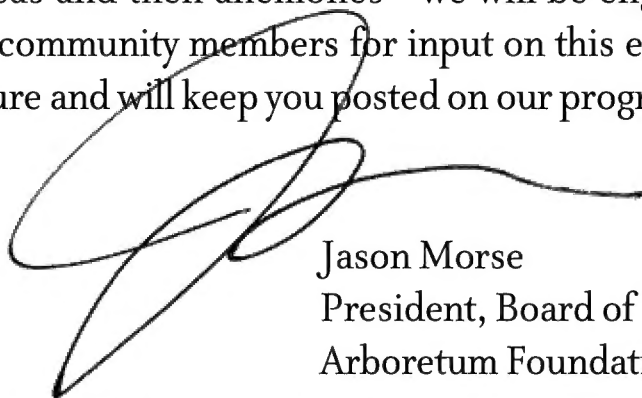
Vision and Innovation

With the New Year upon us, we join with people around the world to celebrate a time of new beginnings and hope for the future. Living in the Pacific Northwest, I especially appreciate how early the botanical reset button gets pushed here, with the late-winter blooms of sweet box, daphne and hellebore serving as grand marshals of a botanical parade that won't stop marching until the first frosts of autumn. This splendid cycle has been repeating itself at the Washington Park Arboretum since its founding in 1934.

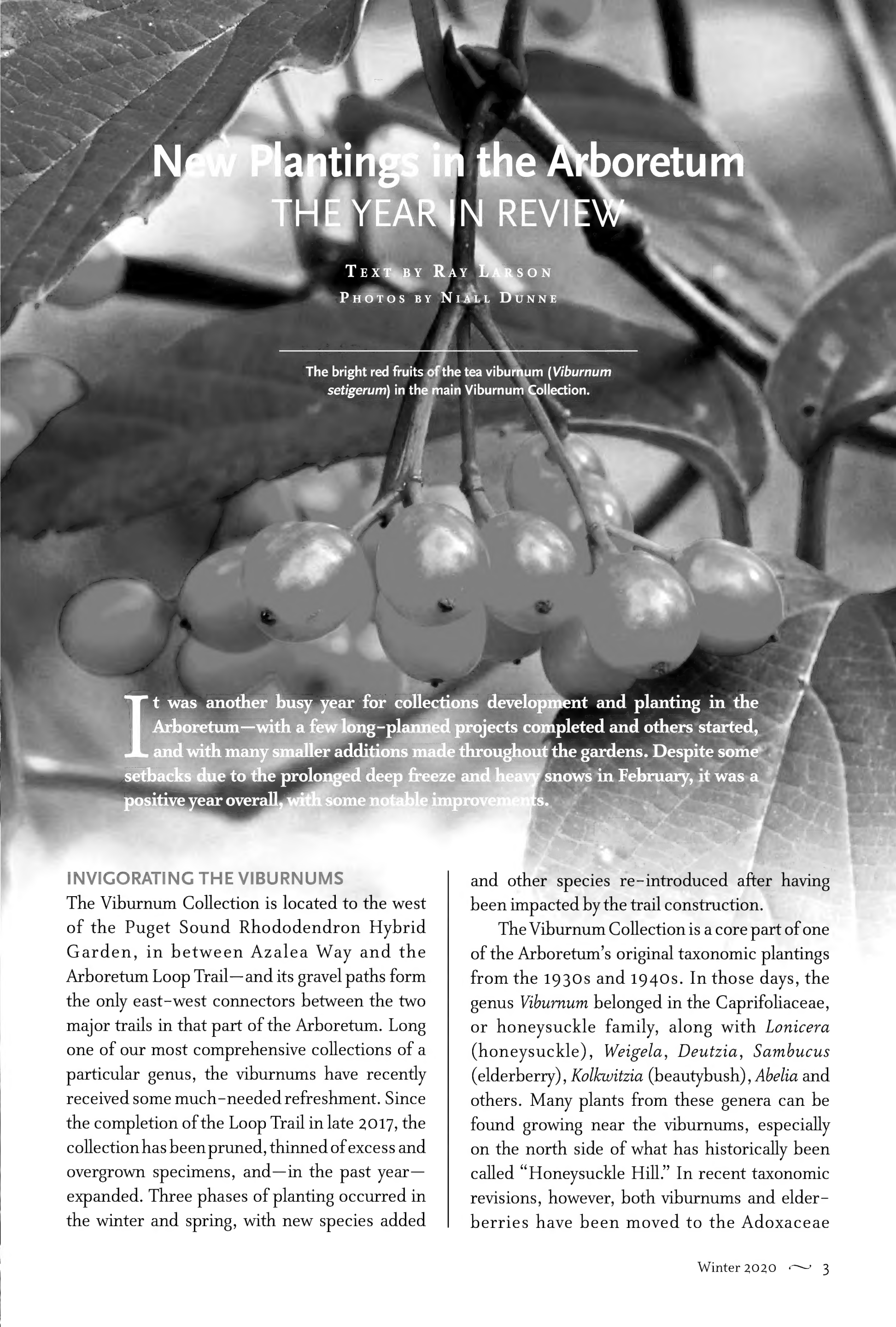
Back then, inspiring leadership from the City, the University and community members brought this wonderful place into being and established the basic three-party structure of governance and support that we still operate under today. During our 85-year history, we've gone through many cycles of our own, as evolving economic realities, community needs and environmental concerns have presented new challenges and opportunities. Some of these periods have been characterized by greater adherence to the status quo, while others have involved Arboretum stakeholders taking a more visionary approach.

Recently, with rapid growth and change in our city, an increasing need to focus on environmental and social justice issues, and staff leadership changes at all three partner organizations, our Board has come to realize that we may be entering one of those periods that warrants a greater focus on innovation. This year, along with our partners at the UW Botanic Gardens and Seattle Parks and Recreation, we have chartered a task force to enter into meaningful discussions about how we can best work together in the future to bring value to our community—and to our planet—through this amazing community resource.

As the year progresses—and the hellebores give way to magnolias, azaleas, hydrangeas and then anemones—we will be engaging with staff, stakeholders and community members for input on this exciting conversation about the future and will keep you posted on our progress.



Jason Morse
President, Board of Directors
Arboretum Foundation



New Plantings in the Arboretum

THE YEAR IN REVIEW

TEXT BY RAY LARSON

PHOTOS BY NIALL DUNNE

The bright red fruits of the tea viburnum (*Viburnum setigerum*) in the main Viburnum Collection.

It was another busy year for collections development and planting in the Arboretum—with a few long-planned projects completed and others started, and with many smaller additions made throughout the gardens. Despite some setbacks due to the prolonged deep freeze and heavy snows in February, it was a positive year overall, with some notable improvements.

INVIGORATING THE VIBURNUMS

The Viburnum Collection is located to the west of the Puget Sound Rhododendron Hybrid Garden, in between Azalea Way and the Arboretum Loop Trail—and its gravel paths form the only east-west connectors between the two major trails in that part of the Arboretum. Long one of our most comprehensive collections of a particular genus, the viburnums have recently received some much-needed refreshment. Since the completion of the Loop Trail in late 2017, the collection has been pruned, thinned of excess and overgrown specimens, and—in the past year—expanded. Three phases of planting occurred in the winter and spring, with new species added

and other species re-introduced after having been impacted by the trail construction.

The Viburnum Collection is a core part of one of the Arboretum's original taxonomic plantings from the 1930s and 1940s. In those days, the genus *Viburnum* belonged in the Caprifoliaceae, or honeysuckle family, along with *Lonicera* (honeysuckle), *Weigela*, *Deutzia*, *Sambucus* (elderberry), *Kolkwitzia* (beautybush), *Abelia* and others. Many plants from these genera can be found growing near the viburnums, especially on the north side of what has historically been called "Honeysuckle Hill." In recent taxonomic revisions, however, both viburnums and elderberries have been moved to the Adoxaceae

(moschatel family), a much smaller family that also has opposite leaf arrangement. (This type of family name shifting is one reason why laying out entire public gardens according to taxonomic theme has become outmoded.)

While viburnums have fallen somewhat out of horticultural favor in recent decades, they are a large group comprised of many very useful and attractive species. My goals with this collection have been to increase species diversity, grow more plants propagated from wild-collected seed, and showcase additional evergreen examples that are less familiar to the public.

While the construction of the Loop Trail did affect some of the original plantings (which we propagated for reintroduction), overall it has helped us make improvements. Along with being somewhat out of the way, the old viburnum area had become very shaded over time. The Loop Trail not only made the collection more accessible to visitors, it also increased light exposure to existing plants. Viburnums prefer sunnier conditions, and the trail has resulted in increased flowering and better fall color.



The yellow-fruited linden viburnum (*Viburnum dilitatum* 'Xantocarpum') planted in new beds along the Loop Trail.

The trail also opened up some new opportunities for expanded planting beds. Using funds from a generous donor to the Arboretum Foundation, we added new berms and beds north of the existing collection along the trail. This allowed for the planting of new species, as well as many of the re-propagated plants. Another added benefit of the trail has been increased visibility into the Viburnum Collection from Lake Washington Boulevard.



The evergreen *Viburnum awabuki* 'Chindo' in flower.

In three of the new beds, we added large examples of the wild-collected evergreen species *Viburnum henryi*. Two of these were transplanted from a shaded area along Azalea Way, while the other was generously donated by local horticulturist Riz Reyes from his former home garden. All three of the plants are progeny of seed that Riz collected in Sichuan, China back in 2004, while an undergraduate student in the old UW Urban Horticulture program. Riz also donated a large example of *Viburnum propinquum*, grown from seed collected during that same trip. The plants are settling nicely in their new home, and the new growth should be especially attractive next spring.

Viburnum henryi has long been one of my favorite members of the genus. In 2006, I planted a two-gallon specimen—also from Riz—at the UW president's residence and, over the years, have always been impressed with its attractive performance. The shrub's willow-like leaves emerge in bronze and burgundy before turning a glossy dark green, and its white, late-spring flowers have a light honey scent. The species grows best in full sun in our climate and reaches



Fragrant snowball (*Viburnum x carlcephalum*) in bloom by the Loop Trail.

six-to-eight feet tall in maturity in bright conditions. In 2005, I planted another specimen in my parents' garden in a shadier situation, and it has performed steadily with little special care. But sun is where it does best, and I chose bright

positions along the Loop Trail to highlight the plant’s charms.

Elsewhere, we planted several other evergreen types, including *Viburnum awabuki* ‘Chindo’— a selection originally collected on Chindo Island, South Korea. Along the trail in the original collection area, we planted *Viburnum* aff. *atrocyaneum* (recently confirmed as *V. propinquum*) from a Far Reaches Farm collection expedition to Hubei, China. Closer to the Boulevard, one of Dan Hinkley’s collections of *Viburnum cylindricum*—a large-growing species native to Southeast Asia—was added, along with several deciduous species.

Examples of the deciduous species *Viburnum cotinifolium*, *V. betulifolium* (birchleaf viburnum), *V. dilatatum* (linden viburnum), *V. lantana* (wayfaringtree viburnum), *V. parvifolium*, *V. prunifolium* (blackhaw), *V. setigerum* (tea viburnum), and several others were interspersed along the trail as part of a planting of more than 50 individual specimens.

Providing some contrast to the viburnums in this area, we planted a wild-collected *Acer saccharum* var. *leucoderme* (chalk maple), a southern variant of the sugar maple that’s shorter than its northern cousin but features the same outstanding fall color. We also planted a specimen of *Magnolia* aff. *insignis*, grown from seed collected by Dan Hinkley in the mountains of northern Vietnam.

HONEYSUCKLE FAMILY

Just a bit to the north of the *Viburnum* Collection, along the trail on the east side of Yew Hill, we refreshed another newly opened-up area with plants from the honeysuckle family. Most of



Fruits of *Lonicera purpurascens* in the Honeysuckle Collection.

these were propagated from existing plants prior to trail construction, but we also included some new acquisitions. We replanted several shrub honeysuckles, including *Lonicera purpurascens*, a Himalayan species that features burgundy-tinted flowers and seems to be absent from other arboreta in the U.S. We also replanted *L. insularis*, *L. ferdinandii*, *L. discolor* and others. Unlike in parts of the eastern U.S., most shrub honeysuckles have not shown invasive tendencies in the Pacific Northwest.

We planted groupings of *Weigela maximowiczii* and *W. japonica* var. *sinica*, which are profusely flowering upright shrubs with creamy-yellow and pink flowers, respectively. We also added the white-flowering *Deutzia* × *magnifica* ‘Erecta’, which boasts handsome peeling bark and double flowers along arching stems. Rounding out the show are two different varieties of *Philadelphus coronarius* (sweet mock orange), a *P. coronarius* hybrid, and a golden-leaved selection, ‘Aureus’. We also added three evergreen companions for texture and structure: the conifers *Chamaecyparis taiwanensis* and *Cephalotaxus fortunei*, and the broadleaf evergreen *Phillyrea angustifolia* var. *rosmarinifolia*, an osmanthus relative.

Planting in this area was supported by several volunteer work parties from the Seattle office of the company DocuSign, as well as continued major donor support for our Lake Washington Boulevard and Loop Trail improvements.

ARBORETUM CREEK PROJECT

Thanks to the same donor, another large project occurred along the Lake Washington Boulevard corridor: the planting of an area of mostly native species adjacent to Arboretum Creek—on the west side of the road, opposite the Viburnum Collection. Over many months in 2018 and 2019, invasive plants were removed from this area, existing shrubs and trees were pruned, and mulch was laid down.

This project enabled us to complete the first round of native plantings between the Boulevard and Creek in January. Here we installed many tough but attractive species, including *Philadelphus lewisii* (western mock orange), *Acer circinatum* (vine maple), *Holodiscus discolor*



Orange flags marking new native-shrub plantings along Arboretum Creek.

(oceanspray), *Physocarpus capitatus* (Pacific ninebark), and *Malus fusca* (Pacific crabapple), along with a few conifers such as *Tsuga heterophylla* (western hemlock) and *Thuja plicata* (western red cedar). Adjacent to the Boulevard, we planted two larger examples of ‘Starlight’, a hybrid of *Cornus nuttallii* (Pacific dogwood) and *C. kousa* (Kousa dogwood) that combines the shape and large flowers of our native dogwood with the disease resistance of the East Asian species. We plan to add more ornamental shrubs and trees to the vicinity this winter, now that additional areas have been cleared of invasive plants.

BOULEVARD & FOSTER ISLAND ENTRY

Also as part of the larger Lake Washington Boulevard Corridor project, we planted a new bed along the Loop Trail next to where the Boulevard intersects with Foster Island Road. The semi-circular bed stretches back from the rock work on the east side of the trail and will add a long season of late-winter to early-summer interest at this Arboretum entry point. We planted two specimens of the late-winter bloomer *Corylopsis pauciflora* (buttercup winterhazel) along the rockery, plus three early spring-blooming *Camellia japonica* ‘Showa-no-Hikari’. This camellia bears single, yellow-centered, whitish-pink flowers streaked with dark-pink patterns.

Next to bloom in the bed are three *Rhododendron* ‘Wilbrit’, an older, moderate-sized cultivar featuring dark-green, rounded leaves and pink flowers. *Rosa wardii* var. *culta*, a single-flowered, creamy-white shrub rose (also growing in the larger bed just to the southeast) will continue the bloom season. Finally, two *Philadelphus purpurascens*, a mock orange species

from China with white blossoms and purple sepals, will close out the flowering in late June.

Quercus rugosa, a small, hardy evergreen oak from the southern U.S. and Mexico, provides a backdrop to the new bed, while expanding the species diversity of the adjacent Oak Collection. The plantings are relatively small now, but over the next few years will fill out and become more prominent at this busy intersection.

MEDITERRANEAN MAGIC

Early spring also saw additions to the Mediterranean Garden—a small collection of plants native to Mediterranean regions around the world, originally developed in the late 1940s. Located along Arboretum Drive, just south of the Fiddleheads Forest School, this area has relatively well-draining soils and was, historically, one of the brighter and drier sections of the Arboretum. Over the years, however, the garden has become shaded by the continued growth of nearby conifers. Beginning in 2015, some trees at the south and west sides were thinned to let in more light, and the sun-loving Mediterranean species have benefited.

We’ve also added several new plants, donated by the Arboretum Foundation from its Mediterranean-themed display garden at the 2019 Northwest Flower and Garden Festival. We incorporated two olive cultivars, *Olea europaea* ‘Manzanillo’ and ‘Mission’, near the *O. europaea* ‘Frantoio’ that was installed in 2016. While the plants are settling in well so far, it might be several years before we can offer “Arboretum Olive Oil” in the Gift Shop to complement the Arboretum Honey! *Cupressus sempervirens* ‘Glauc’, a cultivar of the Italian cypress, was also added.

PACIFIC CONNECTIONS ENTRY GARDENS

We continued to add plants to the Pacific Connections Garden, including new species in all five of the entry gardens surrounding the central meadow. To provide more evergreen interest and contrast in the Cascadia Entry Garden, we planted two cultivars of our native hemlock species, *Tsuga mertensiana* (mountain hemlock) and *T. heterophylla* (western hemlock). ‘Iron Springs’ is a dwarf version of



Drimys winteri var. *chilensis* blooming along the Loop Trail in Pacific Connections.



Crinodendron hookerianum 'Ada Hoffman' blooming in the Chile Entry Garden.

the western hemlock with a more open form than the straight species. (An example of the original 1968 introduction of 'Iron Springs' can be found in the rockery south of the education greenhouse by the Graham Visitors Center; another grows in the hemlock grove in the Magnolia Collection.) 'Sherwood Compact' is a slow-growing, blue-foliaged

cultivar of the mountain hemlock. We also planted *Acer circinatum* 'Sunglow', a golden-leaved selection of our native vine maple, in a recently expanded section of the Cascadia Entry Garden along Arboretum Drive.

In the Chile Entry Garden, we added three specimens of *Crinodendron hookerianum* (Chilean lantern tree) and one of the cultivar *C. hookerianum* 'Ada Hoffman'. Both are small evergreen trees that bear stunning lantern-shaped flowers in spring and summer—red on the straight species and light pink on the cultivar.

In the China Entry Garden, another winter-blooming *Edgeworthia chrysantha* 'Nanjing Gold' was planted closer to the path; a narrow-growing selection of the dove tree, *Davidia involucrata* 'Iseli Fastigiata' was added north of the interpretive shelter; and *Viburnum cylindricum* was planted in a tough spot on the southwest side of the shelter to close off an unwanted social trail.

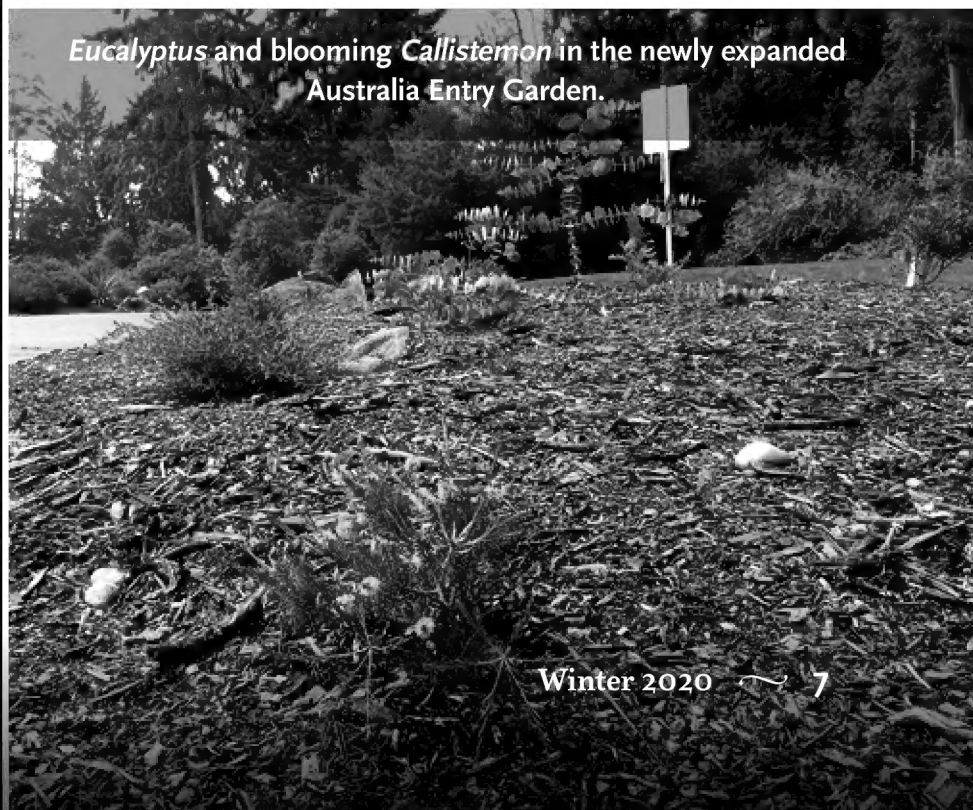
The New Zealand Entry Garden also saw some additional plantings of *Olearia* × *haastii* and *Podocarpus nivalis*. Three specimens of the

dark and twiggy *Pittosporum crassifolium*—a new species for us—were added as well. (I continue to be impressed with the diversity of the *Pittosporum* genus, and especially with species from New Zealand.)

AN EXPANDED AUSTRALIA DISPLAY

The biggest addition to Pacific Connections Garden—since the 2013 planting of the New Zealand Forest—was a major expansion of the Australia Entry Garden, which took place in late May. This was the result of a generous donation from Daniel Springer in honor of his mother, longtime Arboretum volunteer Jenefer Hutchins.

The vehicle turnaround just north of the main Australia Entry Garden bed was largely devoid of plantings since the creation of the New Zealand Forest and, in recent years, the area's two major native trees—a bigleaf maple and Pacific madrone—had either severely declined (in the case of the former) or died (the latter), partly due to construction impacts. The other significant plantings in the area—two majestic *Parrotia persica* (ironwood) within the turnaround—had remained in excellent condition and were retained. The rest of this area, along with the northern half of the bed on the south side of the turnaround, were planted with species and cultivars native to Australia. From the earliest planning of Pacific Connections, this area had been imagined as an expansion of the Entry Garden, showcasing Australia's many garden-worthy plants.



Eucalyptus and blooming *Callistemon* in the newly expanded Australia Entry Garden.

Three different smaller *Eucalyptus* trees—*E. parvula*, *E. rubida* and *E. perriniana*—were installed to anchor the adjacent plantings of many forms and selections of *Grevillea*, *Callistemon* (bottlebrushes), *Leptospermum*, *Podocarpus* and *Tasmannia*, as well as examples of *Prostanthera cuneata* (alpine mint bush), *Hakea microcarpa* and *Lomatia myricoides*. Over one hundred plants were installed, and they are settling in.

The floral display will start in early fall—with many of the *Grevillea* selections blooming through the winter—and then continue in spring and summer with the red, yellow and lime-green flowers of the bottlebrushes. Alpine mint bush—on the Great Plant Picks list (www.greatplantpicks.org) for the Pacific Northwest—will chime in from late spring to early summer with small, orchid-like white flowers. So will the alpine tea trees *Leptospermum rupestre* and *L. namadgiensis*, with their profusions of white flowers. It should be quite a show in the coming years as the plants fill in.

Further plantings in the fall of 2019 near the east and northern edges of the turnaround included *Grevillea victoriae*, *Eucalyptus perriniana* and *E. parvula*. Later in 2020, once they grow a little larger in our nursery, we will begin to add more specimens of snow gum (*Eucalyptus pauciflora* var. *niphophila*).



'Iron Springs' western hemlock in the Cascadia Entry Garden.

PACIFIC CONNECTIONS FOREST PLANTINGS

The Pacific Connection forest displays also saw the addition of many new species. In the Cascadia Forest, near the circular stone bench at the garden's high point, four *Picea breweriana* (Brewer's spruce) were planted to bring more

conifers into the display. This rare conifer species is endemic to the Siskiyou Mountains in southwest Oregon and the northern ranges of California. It has a weeping habit when mature. We have one larger example that was planted in the Entry Garden ten years ago and are looking forward to having a small grove of this iconic conifer alongside other mid- and higher-altitude evergreens in the forest garden.

Also along the northern portion of the forest, we planted several additional *Calycanthus occidentalis* (western spice bush), *Gaultheria humifusa* (alpine wintergreen), and *Quercus vaccinifolia* (deer oak). In the southern half of the forest garden, we added some *Cercis occidentalis* (western redbud) and *Amelanchier alnifolia* (western serviceberry), along with examples of *Arctostaphylos* and *Ceanothus*. Two other new additions are the large herbaceous perennial *Aralia californica* (elk clover), which features ball-like clusters of white summer flowers and dark-purple fall berries, and the dwarf silk tassel, *Garrya buxifolia*, which grows to about half the size of its coastal cousin, *Garrya elliptica*. We hope to plant many more of these two in the near future, as they are common components of the Siskiyou region.

In the Gateway to Chile, we planted more wet-tolerant species that can handle the seeps and clayey soils of this area. Two *Podocarpus salignis* (willow-leaf podocarp) and a *Fitzroya cupressoides* (alerce) were added to bare areas on the slope, along with several *Gunnera tinctoria* and *G. magellanica*. These species have proved more adaptable to the wet conditions than some of the original plantings of 2010. *Podocarpus salignis*, in particular, has impressed us with its unusual evergreen texture—more like the tropical members of the genus—and its moderate,



Western spice bush (*Calycanthus occidentalis*) in bloom in late summer.

attractive growth. An *Araucaria araucana* (monkey puzzle) was added to a drier position in the rockery near the benches at the northeast corner of the Gateway, along with the large, late summer-flowering perennial *Lobelia tupa*.

Farther to the northwest, along the Loop Trail, several more Chilean species were added to help fill in areas exposed during trail construction. These included two *Drimys winteri* var. *chilensis*, along with *Azara alpina*, a lower-growing member of this genus of attractive broadleaf evergreens—and another new species for us.

A little farther north along the trail, in the future China Forest, we added more plants native to Emei Shan, in Sichuan Province. This included two maple species, *Acer campbellii* ssp. *flabellatum* and *A. davidii*, as well as an attractive birch, *Betula* aff. *utilis*, with reddish-brown peeling bark. All three are from various collecting trips by Dan Hinkley. New understory plants include *Helwingea chinensis*, *Mahonia* (*Berberis*) *gracilipes*, and *Stachyurus* aff. *retusus*.

We added many new plants to the larger New Zealand Forest—the fruits of previous seed-collecting efforts in that country—and we’ve been acquiring additional examples of existing plants that have performed well in that garden. We are also excited to have several species of plants from graduate student Kyra Matin’s spring 2019 collecting work in New Zealand now germinating (see page 25). We hope to begin planting these out in the next year or two.

A SAMPLING OF NEW TREES

Spring planting in the Arboretum concluded with the addition of many trees throughout the grounds, including two specimens of *Nyssa sinensis*—an Asian relative of the southeast U.S. native, *N. sylvatica* (black tupelo)—in the

wetlands along the Loop Trail. Like its American cousin, *N. sinensis* also produces outstanding fall color and can tolerate wetter soils.

Several trees re-propagated during the Loop Trail project, including the crabapples *Malus × spectabilis* ‘Riversii’ and *Malus baccata* ‘Pyramidalis’, were planted between Lake Washington Boulevard and the Loop Trail, just north of the expanded parking lot 19 (the “Birch Lot”). A hornbeam from Taiwan, *Carpinus kawakamii*, was added to the hornbeam area west of Duck Bay, and another Taiwanese species, *Sorbus randaiensis*, was planted in the Brian Mulligan Sorbus Collection. Both these specimens were grown from seed collected in the wild by Dan Hinkley.

Cyclocarya paliurus (wheel wingnut) was added to the nut collection just north of Yew Hill. And *Alniphyllum fortunei*, a spring-flowering relative of *Styrax*—another donation by Far Reaches Farm, based in Port Townsend—was planted in upper Rhododendron Glen among a grove of hydrangeas and rhododendrons, overlooking the seasonal stream.

DANIEL J. HINKLEY ASIAN MAPLE COLLECTION

With fall rains arriving early in September, planting was able to resume in earnest. The first installations occurred in the Asian Maple Collection, in anticipation of its dedication in October to renowned plantsman and major Arboretum supporter Dan Hinkley (see page 16). It is fitting that Dan joins two other profound contributors to the Arboretum—Brian Mulligan (*Sorbus*) and Joseph Witt (Winter Garden)—in having collections named after him.

We planted five new trees in the main collection area. Three of them were grown from seed collections made in recent years by Dan: *Acer henryi*, from Hubei province, China; and *A. aff. caudatifolium* and *A. serrulatum*, from the mountains of Taiwan. Also new to the area are selections of *Acer pentaphyllum* and *A. davidii* ssp. *grosseri*.

As companion plants for the maples, we added wild-collected examples of *Hydrangea aspera* and *H. longipes* from Dan’s expeditions.

The new semi-circular planting bed at the intersection of Lake Washington Boulevard and Foster Island Road (see page 6).





Hydrangea longipes in the “China Wedge”
at Pacific Connections

Both have attractive lacecap flowers and large, fuzzy leaves.

HEIGHTENED HYDRANGEA

We planted hydrangeas in other parts of the Arboretum this fall, too. In the main hydrangea section, within the Camellia Collection, we continued to add several *Hydrangea macrophylla*, *H. serrata*, and *H. aspera* varieties. One that I’m particularly impressed with is *Hydrangea macrophylla* ‘Jogosaki’, a double-flower lacecap type that features lilac florets that bloom over a long period. This is planted adjacent to the *Franklinia alatamaha* along Arboretum Drive and should reach six feet tall in time.

In the so-called “China Wedge,” where the main, descending trail of the New Zealand Forest does a final switchback north towards the Lookout Gazebo, we planted more specimens of *Hydrangea aspera* and *H. longipes* to complement existing plantings native to Emei Shan.

These join other new plantings native to that mountain, including *Viburnum betulifolium* and *Mahonia* (*Berberis*) \times *savilliana*. The latter is a naturally occurring hybrid between *Mahonia* (*Berberis*) *gracilipes* and *M. eurybracteata*. Readers of my 2018 “year in review” column might remember me mentioning we had seedlings of this hybrid in our nursery, and I’m excited to add the plant’s attractive, blue-green foliage and late-summer flowers here—and to various plantings in the Arboretum.

REJUVENATING RHODODENDRON GLEN

One area where several other *Mahonia* \times *savilliana* were planted in the fall is Rhododendron Glen. The Glen has seen a lot of changes this past year, and many more are on the way—thanks to a generous gift from Mary Ellen and Gordon Mulder (see “Restoring Rhododendron Glen,” by Jane Stonecipher, “Arboretum Bulletin,” Spring 2019). While planning for larger improvements to the Glen’s upper pond and creek is well under way, immediate progress to planting areas has been ongoing since last February.

In the upper Glen, increasingly dense canopy had reduced flowering in many prized understory plants and led to the loss of others. In June, after careful planning—including consultation with rhododendron experts—we thinned some trees



The round-leaved *Rhododendron williamsianum*
in Rhody Glen.

and removed some others. A few trees were left as snags to support wildlife habitat and the growth of flowering vines. The increase in light has been dramatic, and many of the mature plantings are now more visible.

During the spring and summer, invasive plants such as bindweed were removed, and other rampant growers such as *Vinca minor* were reduced. Rockeries were uncovered, and other declining plants were removed or pruned.

In the fall, we got down to some serious planting business in the upper part of the Glen. Here we have added several large-leaved *Rhododendron* species such as *R. rex* and *R. sinofalconeri*. Species newer to cultivation, including the blue-green-leaf species *R. yuefengense* and *R. platypodium*, were planted in groups—along with companion plants such as *Mahonia eurybracteata*, a late-spring bloomer with blue-green foliage,



After removing bindweed and periwinkle from Rhododendron Glen, we installed new specimen shrubs and woodland plants.

M. × savilliana, and several fern species. Other rhododendron plantings included *R. williamsianum*, with its compact habit, rounded foliage, and rose-pink flowers; and *R. orbiculare*, a larger-growing species with near-circular leaves and pink flowers.

The Rhododendron Species Botanical Garden in Federal Way, Washington, very generously donated many of these plants, and we look forward to adding to the diversity and breadth of the collection in the next year. Dan Hinkley also donated new rhododendron species from his collecting trips, along with many companion plants. In addition, Far Reaches Farm contributed many other woodland perennials, shrubs and small trees to the project. We are fortunate to have such a generous and knowledgeable horticultural community in the region. Other than private donations, the UW Botanic Gardens has no dedicated funding for plant acquisition, and we are grateful to our donors—including these and other gardens and nurseries—for support.

The Rhododendron Glen project is one of the most exciting collections projects in recent years, and I’m very much looking forward to continued development and enhancement of the area. Be sure to visit often to check on the progress of this and other gardens. We appreciate your continued support and hope you visit and enjoy the Arboretum throughout the year.

RAY LARSON is curator of Living Collections at the University of Washington Botanic Gardens and curator of the Otis Douglas Hyde Herbarium, the Arboretum’s herbarium housed in the Center for Urban Horticulture.



TOP LEFT: New planting of *Beesia calthifolia* blooming in Rhody Glen.

RIGHT: *Mahonia × savilliana* in Rhody Glen.



Photo courtesy Joe Abken

In early October, the UW Botanic Gardens undertook a joint seed-collecting trip in the Siskiyou Mountains with representatives from the Heronswood Garden in Kingston, Washington and the Kruckeberg Botanical Garden in Shoreline, Washington. Pacific Connections Garden horticulturist Joanna Long joined me, Heronswood curator Nathan Lamb and taxonomist Ross Bayton, and Kruckeberg executive director Joe Abken on the five-day sojourn.

We gained valuable insights into the flora and landscapes of the area and collected seed from more than 90 different taxa. With help from these partners, we will be growing the plants on in the coming years for inclusion in the Cascadia Forest. We are excited to add more diversity of species to the display, and to establish a closer approximation of the landscape character of the Siskiyou. It was a very successful and informative trip. 🌿

A Vision of the Future Arboretum

Investigating a Library Archive Mystery from 1930

BY REBECCA ALEXANDER

Based on research by
Laura Blumhagen, Rebecca Alexander and Jessica Moskowitz

Sometimes we find puzzling things in our archives at the Miller Library, and they lead to fascinating stories. Here is one example: Inside a folder on the subject of “Washington Park Arboretum founding” is a photocopy of a printed document from 1930, with no cover or title page. It appears to be an internal or draft document, not formally published. Also in the archives, we found a 1962 paper about the origins of the Arboretum by then-UW student Marjorie Clausing that refers to the 1930 document as “Bulletin No. 1” of the Arboretum and Botanic Garden Society of the State of Washington (not to be confused with the “Arboretum Bulletin,” first published by the University of Washington in 1936).

The Arboretum and Botanic Garden Society, formed in early 1930, was a short-lived group set up to help establish and maintain an Arboretum at Washington Park—a kind of precursor to the Arboretum Foundation. It seems the group only produced a single “Bulletin” before dissolving. The lengthy title of the document in our archive is “A history of Arboreta and Botanic Gardens, Tentative Plans for Washington Park Arboretum development, articles of incorporation, with a foreword by Sara Wrenn.”

What especially caught our attention was Sara Wrenn’s colorful writing style. She begins by describing the Washington Park of 1930, five years before the establishment of the Arboretum: “A pleasant, fruitful land, yet withal neglected, in watercourses, changed and dry, in wanton undergrowth and ragged trees.”

She then envisions the place 100 years in the future. Here is an excerpt:

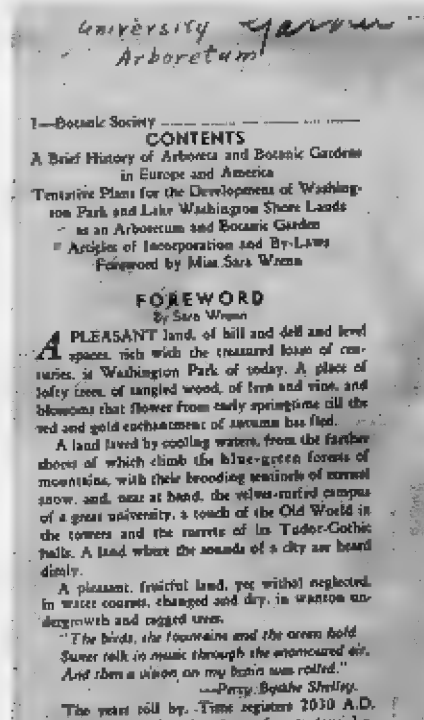


“The years roll by. Times registers 2030 A.D. Gone are the unlovely places of yesterdays. Lagoons, bordered with lily and lotus blossom,

with water plant of home and abroad, wind in and out where lush green willows dip their long tendrils delicately; where the brilliant foliage of all the maples mingle; where lilacs and bamboo reflect themselves; where cherry and plum tree, wild red currant and fragile huckleberry spread the waters with shattered rainbow hues. Lagoons where fish, even to the lordly silversides, disport themselves; where white swans float, the grey geese call, and ever and anon the wild ducks rise to wing.

“Trees, shrubs and flowers from all the temperate zone add their beauty to those with which Nature blessed the Pacific Northwest. The blue spruce of Colorado and the spruce of Norway fraternize with the majestic Douglas. Broad, grassy avenues lead through drooping hemlocks mingled with pines, the purple-berried juniper and the lace-mantled cedar, even to the cedars of ancient Lebanon.

“... On the open hillsides glow azaleas of every color, spilling their fragrance on the soft south winds.”



Not too far off the mark, really, when you consider the botanical riches growing in today's Arboretum.

Wrenn goes on to describe a great glass dome with a library, museums, herbaria and conservatories—all on Foster Island—thereby envisioning a kind of hybrid between the Center for Urban Horticulture and the Amazon Spheres!

This obviously was never created, but it does align with early plans for the north end of the Arboretum developed between 1932 and 1934 by Seattle Parks Department landscape architect Frederick Leissler, who went on to become the Arboretum's assistant director from 1935 to 1940. (Leissler helped execute the Olmsted Brothers planting plan for the Arboretum, completed in 1936.)

We don't know if the 1930 vision of the Arboretum originated with Sara Wrenn, or if she was simply hired to put it all into memorable prose. We were perplexed, however, to find a version of Wrenn's vision in another document from that era, but without her name attached.

In these same archives is a bound pamphlet dated 1931, also titled "Bulletin No. 1" of the Arboretum and Botanic Garden Society—presumably the final draft. The foreword is slightly longer than that of the 1930 document, but it concludes with a "vision of the future Arboretum" that is nearly word-for-word the same as Sara Wrenn's, adjusted forward in time by one year, to 2031. The authorship of the 1931 foreword, however, is credited solely to Professor Herbert H. Gowen, for whom the University of Washington's Gowen Hall is named.

The 1931 pamphlet has become part of the official Arboretum record. In the 2003 historic review, published as part of the Arboretum Master Plan (see <http://depts.washington.edu/uwbg/docs/arbhistory.pdf>), Gowen alone is credited with the authorship of this vision. But did the prominent professor do a few light edits and simply attach his name to it? Might the editor of the "Bulletin No. 1" (assuming there was one) have neglected to give Wrenn proper credit? Was the original author even consulted?

It made us wonder: Who was Sara Wrenn? We did some digging, and here's what we were able to discover.

Crediting Sara Wrenn

Sara Blanche Wrenn was born in Oregon on April 24 either in 1873 or 1881 (census and passport records vary). Her jobs included railroad clerk, Oregon Supreme Court stenographer, and advocate of women's suffrage. During World War I, she spent time doing "war work in the industrial centers of the east" as a special agent of the investigation and inspection service of the Department of Labor. She traveled to Asia as a journalist between 1919 and 1922. An item in the society pages of *The Morning Oregonian* (June 8, 1922) announces her return from abroad:

"She passed 18 months in Pekin and a year and a half in Japan, Corea, and other countries. She was the first woman correspondent through the famine district. She went for the Philadelphia Ledger and visited many out-of-the-way places. Miss Wrenn will be in Portland for a few days and will pass the summer at Gearhart. She will do some writing while at the beach. She will be the guest of her sister, Miss E. E. Wrenn."

In the 1920s, Wrenn ran a tea room called *The Yellow Lantern Under the Hill* in the Oregon seaside town of Gearhart. By 1930, she was working as a publicity writer for the Seattle Chamber of Commerce. She was well-known enough that the society gossip column of the "Town Crier," a Seattle weekly publication, noted her heading back to work downtown from her lunch break uptown!

She corresponded with Edmond S. Meany while researching an article about pictographs in the Pacific Northwest around the same time that she wrote the preface for the "Bulletin." She also published a travel article in the "Los Angeles Times" in June 19, 1931, "Vacation Land Invites Weary: Northwest Spreads Alluring Choice for Tourist." The similarity of the prose to that in the Arboretum document is obvious: "The Evergreen Playground is the land of summer dreams come

true. A region of jade-green waters, of mighty trees, lush greenery of fern and perennially verdant bosage.”

Wrenn may not have been a close associate of Herbert Gowen, but they ran in the same social circles: The December 5, 1931 holiday arts feature of the “Town Crier” includes contributions by both. Sara Wrenn’s piece is called “The City that Grew,” about “the most northern of America’s four guardians of the Pacific rim,” Seattle. In the essay, she uses the very same phrase from the “Bulletin No. 1” foreword to describe “the white eminence of Mount Rainier—The Mountain that was God.” Gowen’s piece is “A Christmas Message,” and it is suitably sermon-like: Gowen was head of the UW’s Oriental Art and Literature department, but he was also an Anglican rector.

Wrenn was active in the Seattle writing scene, and in 1933 was serving as corresponding secretary of the Seattle Penwomen’s League, a chapter of the League of American Penwomen. In the 1930s and 1940s she worked for the Federal Writers’ Project (created in 1935 as a branch of the Work Progress Administration), collecting oral histories in and around Portland on subjects such as early pioneer life and early horticultural history and lore.

We found no trace of her after the 1940s until her death in 1962. It is possible she spent her later years caring for her older sister Etta, with whom she lived in Seattle’s Queen Anne neighborhood, and in various locations in Oregon over several decades.

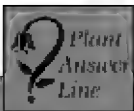
We may never know if Wrenn was actively involved in planning and advocacy for the Arboretum. Likewise, we don’t know if she consented to have her writing presented with superficial changes under Herbert Gowen’s name. The value in delving into her past is to give credit where it is due.

A Sampling of Writings by Sarah Wrenn

“The City That Grew,” in the “Town Crier,” December 5, 1931: <http://cdm16118.contentdm.oclc.org/cdm/ref/collection/p16118coll23/id/20258>

American Life Histories: Manuscripts from the Federal Writers’ Project, 1936 to 1940. Library of Congress: <https://www.loc.gov/collections/federal-writers-project/?q=sara+wrenn>

REBECCA ALEXANDER is the manager of Reference and Technical Services at the Miller Library, located in the UW Botanic Gardens’ Center for Urban Horticulture (3501 NE 41st Street, Seattle). She is a contributing editor to the “Bulletin.”



Q&A from the Miller Library’s Plant Answer Line

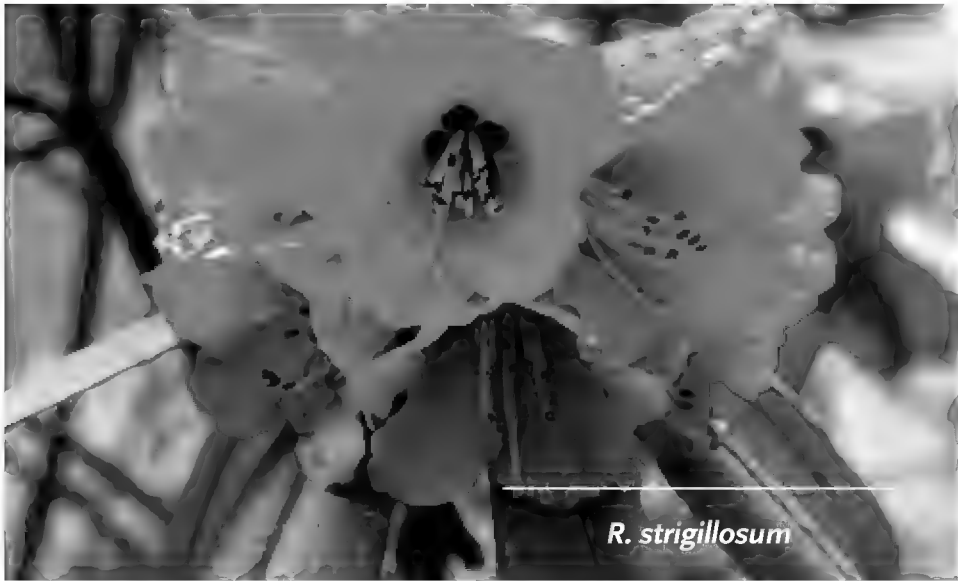
WINTER-BLOOMING RHODODENDRONS

BY REBECCA ALEXANDER

This regular column features Q&A selected and adapted from the Elisabeth C. Miller Library’s Plant Answer Line program. If you’d like to ask a plant or gardening question of your own, please call (206) 897-5268 (UW Plant), send it via the library website (www.millerlibrary.org), or email directly to hortlib@uw.edu.

QUESTION: Aside from ‘Christmas Cheer’, which varieties of rhododendron have winter flowers and flourish in our region? I am

imagining planting a couple in an island beneath some hybrid elm trees, so they would be in part shade. I have plenty of irrigation, and there is a slight slope to the location.



ANSWER: The red-flowering ‘Nobleanum’ is another good winter interest variety, often blooming in December. A post on the American Rhododendron Society’s blog by a Pacific Northwest author lists several others, quite a few of which grow at the Washington Park Arboretum:

‘Bo Peep’ (yellow flowers)

‘Seta’ (flowers white at base, shading to pink; blooms in March in the Witt Winter Garden)

‘Snow Lady’ (pure-white flowers with brown anthers)

‘Cilpinense’ (pale-pink flowers shading to dark pink)

R. mucronulatum (pale-pink flowers; late February to March, north Azalea Way)

R. dauricum (purple flowers; November to January at north end of Azalea Way)

R. moupinense (pink-tinged white flowers; March in Witt Winter Garden)

R. strigillosum (red flowers; late February to March in the Witt Winter Garden)

You can also search the American Rhododendron Society website (www.rhododendron.org/search_intro.asp) for rhododendrons that meet various criteria, including bloom time and flower color.

One of my favorite early-bloomers at the Arboretum is the lavender-flowered species *Rhododendron ririei*, native to China. It blooms in early March. A fine 60-year-old specimen can be found on the east side of the Daniel Hinkley Asian Maple Collection.

In general, rhododendrons do best in filtered light. When planting under a tree, minimize tree root disturbance by using young shrubs. Avoid injuring the tree trunk or large roots. Help your young rhododendrons (and your tree) by applying a thick layer of coarse organic mulch and watering regularly in the first year. ~

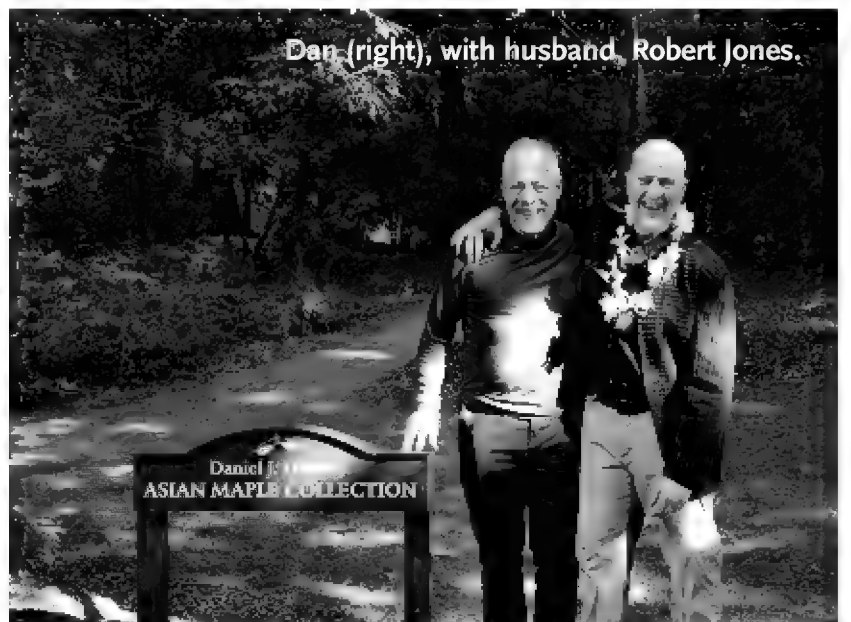
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www.rhododendron.org/blog/?view=plink&id=49

A SPECIAL RECOGNITION



Val Easton giving the champagne toast.



Dan (right), with husband, Robert Jones.

Arboretum's Asian Maple Collection Dedicated to Dan Hinkley

BY NIALL DUNNE

The University of Washington Botanic Gardens has dedicated the Asian Maple Collection in Washington Park Arboretum in honor of local plantsman and world-renowned botanical explorer Dan Hinkley. The dedication recognizes Dan's extraordinary contributions to local, national and international horticulture, plant exploration, and the development of the Arboretum's plant collections.

On Sunday, October 13, 2019, a small crowd of Dan's close friends and relatives gathered at the Graham Visitors Center for the dedication ceremony. The speakers were UW Botanic Gardens' Director Fred Hoyt and Curator of Living Collections Ray Larson, University of

British Columbia Botanical Gardens Associate Director Douglas Justice, and garden writer Val Easton—as well as Dan himself.

Fred welcomed the guests and talked about the time Dan spent living in the stone cottage at the south end of the Arboretum, after moving to Seattle in the early 1980s to pursue his graduate degree in urban horticulture at the UW. Fred also remembered how Arboretum Foundation Unit 16 gave money to the UW Botanic Gardens to support expeditions to bolster the Arboretum's collections, several of which were undertaken by Dan. Fred called Dan “a true gatekeeper” for the Arboretum.

Next, Ray spoke about Dan's early thesis work, which focused on sorting out the taxonomy of the maple collection in the Arboretum. He then talked about how much Dan has generously given to the Arboretum over the decades, including

over 1000 plants in the collection—many of them in the place that now bears Dan’s name. He mentioned how Dan has contributed articles to the “Arboretum Bulletin” for more than 30 years, and how Dan—along with his husband, Robert Jones—has tirelessly helped to raise funds for the Miller Library and Arboretum Foundation and opened up his home and gardens for donor events and tours.

Dan’s generosity was central to Douglas Justice’s remarks, too, as the UBC Botanical Garden in Vancouver has—along with other institutions worldwide—long been the beneficiary of plants from Hinkley-led expeditions and Dan’s famed Heronswood nursery and garden in Kingston, Washington.

When Dan spoke, he focused on his formative experience as a student living on the grounds of the Arboretum. “The plant curator at the time, the remarkable plantsman Joe Witt, wanted me to work on the maples. Back in 1983, the collection was a bit dusty, and it was my job to find and identify them. That’s what I did, in this 230-acre paradise.”

Dan developed a keen eye for distinguishing maple species and varieties, hilariously likening his skill to the art of chicken sexing. “It’s extremely hard to distinguish the gender of the hatchlings, and the best sexers do it almost subliminally. As I explored the Arboretum more and more, I began to *see* maples. It’s a skill I was able to carry with me on expeditions to Asia, and I am so grateful for what I learned here.”

“Of course, it wasn’t just maples that I learned to see,” continued Dan. “There were all the collateral plants, too. It was a biodump of information—of images, shapes, and names—that I encountered. Outside my backdoor of the cottage was a living library filled with knowledge. And it’s a jewel that’s available to us all.”

“To have a little part of this place named for me is more satisfying than I could ever communicate,” he concluded.

After Dan’s remarks, Val Easton led the room in a champagne toast. Then the guests walked up to the newly christened Daniel J. Hinkley Asian Maple Collection and were treated to a tour of the plants by Ray Larson. It was a beautiful, sunny

afternoon, and rich fall colors glowed on many of the trees in the collection. Congratulations Dan, and thanks for all you do for the Arboretum!

The Dan Hinkley ASIAN MAPLE COLLECTION



Thanks in part to Dan Hinkley’s generous plant gifts, the maple (*Acer*) collection at the Arboretum is one of the top three in the country. In a recent “Pacific Northwest Magazine” article about the Hinkley dedication, author Lorene Edwards

Forkner quotes plant curator Ray Larson: “It’s one of our core collections and is recognized as a National Collection by the American Public Garden Association. We have about 80 *Acer* species, of which around 56 are from Asia.”

Maples grow throughout the park, but the highest concentration of species and varieties are in the Woodland Garden and the Dan Hinkley Asian Maple Collection, which is a lovely, open, two-acre hillside site, just south of the Woodland Garden, nestled between the Magnolia Collection and the Puget Sound Rhododendron Hybrid Garden. Here you’ll find gorgeous paperbark maples (*Acer griseum*) from China (dating to the late 1940s); a stunning 20-foot *Acer mandshuricum* (pictured) from the Russian Far East; young maples (*Acer serrulatum* and *A. caudatifolium*) collected by Dan in Taiwan; and much more.

As Dan said in the magazine article, he’s had a lifelong love affair with maples and still considers them to be “the aristocrats of the botanical world.” ~

NIALL DUNNE is the editor of the “Bulletin” and the communications manager at the Arboretum Foundation.

CREATE YOUR OWN TERRARIUM

air plants (*Tillandsia* species) are great for open-topped terrariums because of their adaptability to soil and moisture conditions. (Photo courtesy of Sherry Anderson/Washington Park Arboretum)

BY CLAUDE NORMAN

Terrariums are clear containers with plants directly potted inside. They are an enjoyable addition to any home, offering gardeners the opportunity to create miniature plantings and ecosystems indoors. After the initial set-up, most terrariums are relatively low-maintenance, requiring less watering and other care than potted houseplants. Humidity levels are higher inside terrariums, too, and this benefits tropical plants. Plants in terrariums also tend to grow more slowly, which is helpful if you are short on space.

English physician and collector Nathaniel Bagshaw Ward developed the first terrarium in 1829. Having unsuccessfully tried for years to cultivate ferns indoors, Ward noticed that a seedling had sprouted in a sealed glass container used for moth cocoons. This happy accident led him to develop the hugely influential Wardian case, a miniature glass greenhouse that early European collectors used for shipping live plants from an array of climates around the world.

CHOOSING A CONTAINER

You can find a wide selection of glass terrarium containers for sale at indoor plant stores and online. Or you can make your own by recycling an old fish tank, apothecary jar, or other glass container. When choosing a container, make sure it is untinted, as tinted glass can obscure some of the UV rays needed to support plant life. Also, make sure you are able to fit your hand inside the container—so you can install the plants with ease. Mason jars can make good starter terrariums (especially for kids), but in general small containers can cause planting difficulties and often will only fit a single, small plant.

When choosing a container, it is important to consider whether you want to plant desert or tropical species. Tropical plants prefer humidity and can live in either open or closed (covered) terrariums, but desert plants—such as succulents and cacti—prefer lower humidity and require an open-topped container.

Growing tropical plants in closed terrariums is fascinating because the plants can survive with next to no care by recycling their resources. During the day, they use carbon dioxide and water to photosynthesize sugar, releasing oxygen; at nighttime, they respire, using oxygen to break down sugar, releasing carbon dioxide and water. Rinse and repeat! This daily use and reuse of resources keeps plant growth rate to a minimum. That said, most closed containers are not fully airtight—so some growth will occur, and some watering is required.

SELECTING PLANTS

Different plants have different preferences for soil, moisture, humidity and light, so when you're planting more than one together, make sure to choose plants with similar needs. Plant young specimens because they will be better able to adapt to the conditions and won't quickly outgrow their container.

Tropical

Most houseplants are tropical species and can do well in a terrarium. When combining plants, it's a good idea to mix species of different heights—such as a groundcover, a short filler plant, and a plant with a taller growth habit. This will give the terrarium the aesthetic appeal and vertical structure of a tropical rainforest, while providing enough light to support all the plants.

Sugar vine (*Cissus striata*), philodendron (*Philodendron* species), and spider plant (*Chlorophytum comosum*) can be combined to make a low-light-tolerant terrarium. For a more

colorful terrarium in a brighter spot, rattlesnake plant (*Calathea lancifolia*) combines well with polka dot plant (*Hypoestes phyllostachya*) and inchplant (*Tradescantia zebrina*).

Epiphytes

Epiphytes—plants that grow on other plants—make great additions to terrariums because of their adaptability to water and soil conditions. Many tropical epiphytes, such as philodendrons and ferns, do well in a standard soil mix (see below), while others such as bromeliads and orchids require a fast-draining medium, such as a cactus mix.

Some epiphytes, such as air plants (*Tillandsia* species), do not need soil at all and can grow on any substrate. No “planting” is necessary: Just drop them onto a plant or other surface in your tropical terrarium. High humidity can cause them to rot, so only place them in open terrariums.

Desert

Cactus and other succulents can be used to make dramatic, mini-desert terrariums. Like air plants, desert plants do not do well in humid environments. They prefer wide, open containers that allow for good air circulation, and they need lots of direct sunlight.


Most succulents are slow-growing, so you will not need to redo the terrarium very frequently. Jade plants (*Crassula* species), *Haworthia* species, and mistletoe cactus (*Rhipsalis baccifera*) make a great combination. Adding sand to the top of the soil mix gives these terrariums a fun look without changing their function.

SOIL LAYERS

For tropical plants, you will need a bottom layer of gravel, to give the water a place to drain into and keep roots from rotting. Horticultural sand, polished gravel or gravel from your driveway will work. If you are using gravel from outside, sanitize it first with boiling water or vinegar water. The thicker the gravel layer, the

LEFT: Succulent terrarium with gravel, charcoal, and cactus-mix layers topped by decorative sand.

RIGHT: Tropical terrarium with gravel, charcoal, and coir layers topped with potting soil.



easier it is to water the terrarium. This layer can range from an inch to three inches thick, depending on the size of the terrarium.

Atop the gravel, add a layer of horticultural charcoal (available at your local garden center) for filtration and absorbing moisture. The charcoal helps prevent a build-up of watering-related bacteria and chlorine, reducing molds and odors. This layer should be about half an inch to an inch thick.

Above the charcoal, add a quarter-inch layer of coconut coir (a sustainable alternative to peat moss). This will help maintain humidity in the terrarium and hold the top soil layer in place.

For the top layer, use standard potting soil for tropical plants. Make this layer an inch thicker than the plant roots to allow for growth. In general, add about an inch or two in smaller terrariums and three inches in larger terrariums.

For a desert terrarium, substitute a cactus soil mix for the standard potting mix, so the top layer will dry out faster. Add charcoal and gravel layers underneath, too, but leave out the coconut coir because it will retain too much moisture for your dry-adapted plants.

PLANTING AND CARE

Use your fingers to plant your plants, “digging” holes wide enough to accommodate the plant roots and gently tamping the soil down to hold each plant in place. Plant the large ones first and the smaller ones around them.

After planting, you can add stones or a decorative layer of gravel, sand or moss to give your terrarium the feel of a miniature landscape. Feel free to get creative! Adding dollhouse furniture or figurines can add another dimension of fun to the display.

Keep your terrarium in a bright spot and make sure to keep watch. Water lightly when the soil dries out! Watering needs will depend on plant type and whether you have an open or closed terrarium. Water an open tropical terrarium roughly once a week and a desert terrarium every two weeks. Closed tropical terrariums will

need to be occasionally opened for watering, so make sure the terrarium is in a place where you can watch for plant wilting.

As the plants grow, more frequent watering will be necessary, and your mini garden may eventually need a larger container. I avoid fertilizing my terrariums. Fertilizing plants will provide them with more nutrients and allow more growth, but may cause a build-up of salts that can burn plant roots.

As the plants grow, pruning may be helpful or even necessary. If there is a spent bloom or dead foliage on the plant, remove it to allow light to penetrate through.

Tropical plants are typically understory plants, and most prefer bright, indirect light. If there is a good spot near a window, blinds or a sheer curtain can prevent burning of foliage. Most succulents require direct sunlight. If you cannot fit your desert terrarium in or by a bright window, then using a grow light is a good solution.

SHARING WITH OTHERS

Terrariums make excellent gifts—particularly lower-maintenance ones, such as succulent gardens. Making a terrarium is also an enjoyable family or group project, and an exciting activity for children that can lead to important questions about plants and the key roles they play in the environment. ♡

CLOVER NORMAN works at Swanson’s Nursery, leading workshops and lectures on plant care, ecology and conservation. She has an MA in biology from Miami University.

PARTNERSHIP
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Chinese Photinia

BY NIALL DUNNE

If, like me, you're a fan of red berries in the wintertime, then put the Washington Park Arboretum at the top of your list. From the showy poet's laurel (*Danae racemosa*) in the Witt Winter Garden to the unusual *Cotoneaster tengyuehensis* at the Graham Visitors Center to the many eye-popping *Ilex* species in the Holly Collection, red-berry zealots are spoiled for choices.

One of the most ravishing red-berried plants in the collection is the Chinese photinia, *Stranvaesia davidiana* (syn. *Photinia davidiana*). Native to mountain slopes and river valleys in China, Vietnam and Malaysia, this is a vigorous shrub to small tree with dark-green, lance-shaped, evergreen foliage. A member of the Rosaceae, or rose family, it bears clusters of small, five-petaled white flowers in late spring. These develop into clusters of globular, brilliant-crimson, berry-like fruits (technically pomes, which share characteristics of both rose hips and apples) that persist all the way from late summer into winter.

You'll find a lovely grove of Chinese photinia along the Loop Trail, sandwiched between the Magnolia Collection and the Dan Hinkley Asian Maple Collection. Three of the specimens in this grove date to 1956 and reach up about 20 feet high. Records indicate that they came to us from the Seattle-based Taylor Nurseries (no longer in business). Two younger specimens, dating to 1997, were sourced from the Holden Arboretum, in Kirtland, Ohio and were propagated from seed collected in Hsueh Shan Mountains of Taiwan.

I'm not sure why the berries on this species stay on the plants for so long during the season. Perhaps our local frugivorous birds don't find

HIDDEN TREASURE OF THE ARBORETUM

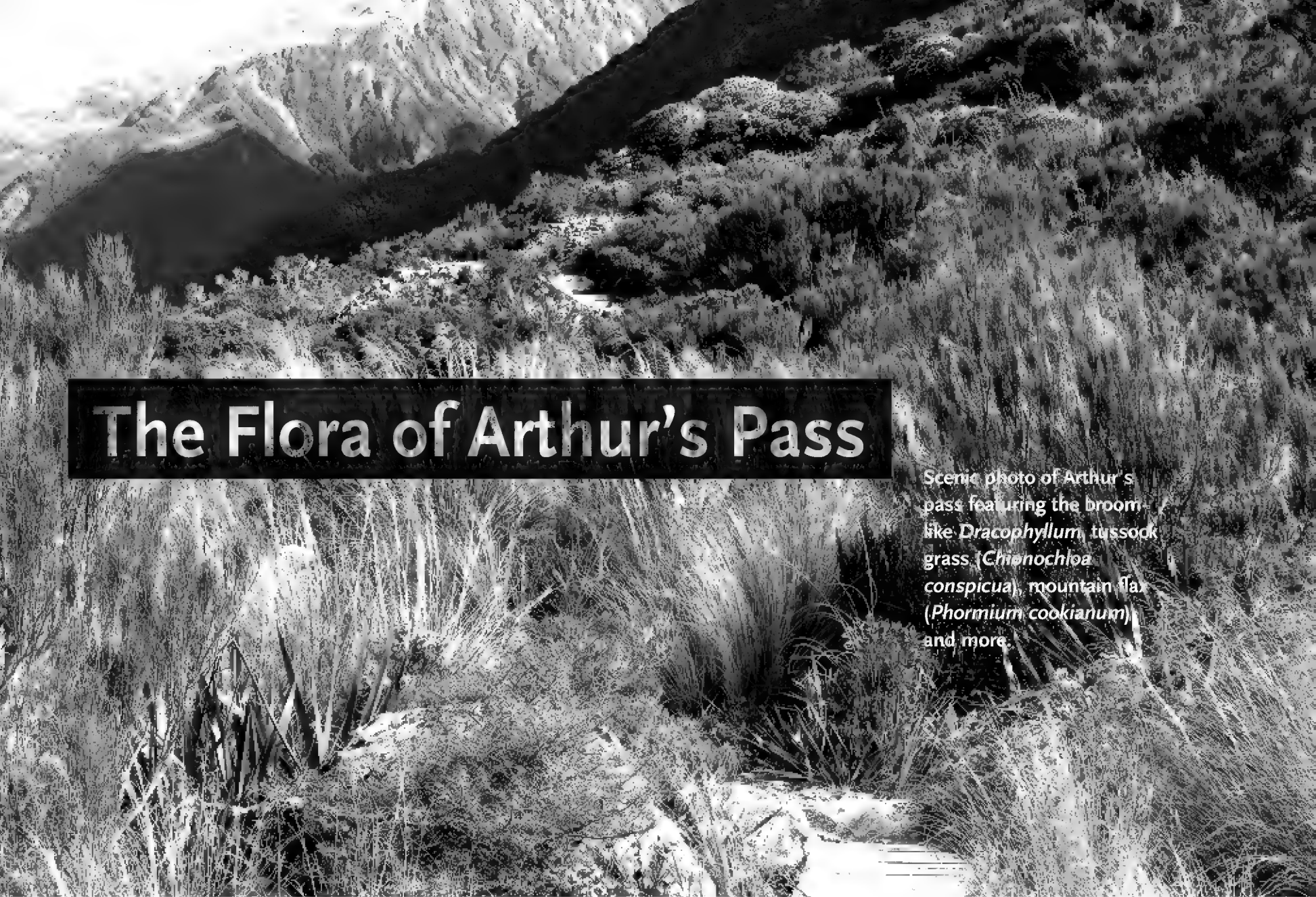


Chinese photinia in flower. (Photo courtesy Krzysztof Ziarnek/Wikimedia Commons)

them particularly palatable. (Tropical birds in Hawaii do seem to appreciate the fruits because they are dispersing the seeds, so much so that the plant is on numerous watch lists for invasive species.) Maybe, like us, the birds are spoiled for choices in the Arboretum's diverse collection.

I was pleased to find out that a low-growing variety of the Chinese photinia, *Stranvaesia davidiana* var. *undulata*, is one of the oldest plants in the Arboretum. It dates to 1937 (three years after our founding) and is still going strong. You'll find it by the main Foster Island Road parking lot, directly across the street from the entrance to the Arboretum's maintenance yard, planted under a bigleaf maple. ~

NIALL DUNNE is the editor of the Arboretum Bulletin and the Communications Manager for the Arboretum Foundation.



The Flora of Arthur's Pass

Scenic photo of Arthur's pass featuring the broom-like *Dracophyllum* tussock grass (*Chionochloa conspicua*), mountain flax (*Phormium cookianum*), and more.

A Trip to See the Arboretum's New Zealand Forest In Situ

BY JANINE ANDERSON

For almost eight weeks in February and March of 2019, my husband Terry LeLievre and I traveled throughout New Zealand—from the northernmost point at Cape Reinga to the southernmost point at Bluff, then even farther south to Stewart Island. That's a distance of about 900 miles, and the variety of flora we encountered in between was remarkable.

One of our most anticipated stops was at Arthur's Pass National Park, in the Canterbury region of New Zealand's South Island. Arthur's Pass was the inspiration for the very first eco-geographic garden in Washington Park Arboretum—the New Zealand High Country Exhibit, created in 1993. This small but dramatic garden was integrated into the larger New Zealand Forest in 2013, and Terry and I were excited to see the “real deal” for ourselves.

Arthur's Pass National Park

Arthur's Pass is a mountain pass in the northern part of the Southern Alps, which run almost the entire length of New Zealand's South Island. It sits within Arthur's Pass National Park, a 700-square-mile protected area of mostly rugged, mountainous terrain. While the tallest peak in the Southern Alps (Mount Cook) is more than 12,000 feet in elevation, Arthur's Pass tops out at around 2500 feet. The drive from the city of Christchurch on the east coast to Arthur's Pass takes about two hours, and magnificent vistas soon come into view as you travel west.

Similar to the Cascade Mountains in Washington State, the Southern Alps have a wetter western side and a drier eastern side. Arthur's Pass summit receives about 160 inches of rain annually, while annual rainfall just nine miles to the east is less than half that amount.



Phyllocladus alpinus (center)

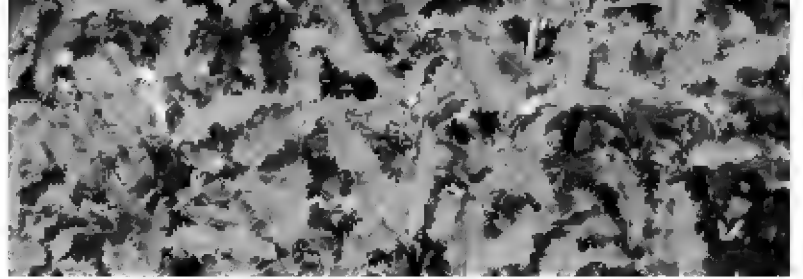
The landscape and flora reflect the differences in climate and elevation. The wetter western mountain slopes support dense rainforest, while the drier eastern slopes are blanketed in forests of southern beech (*Nothofagus*). Tussock grassland and other alpine vegetation are found in between.

On our sunny afternoon arrival at Arthur's Pass, we opted to explore the Dobson Nature Walk at the pass summit. The next day, we spent the morning "tramping" (the Kiwi word for hiking) through beech forest on the Bealey Spur Track, after which the skies opened and it rained nonstop, including all the following day during our drive to the west coast.

Dobson Nature Walk

The Dobson Nature Walk features a variety of alpine herbs, tussocks and shrubs in an open, rocky landscape with beautiful views of the surrounding mountains. Flowers bloom from November to February. Some blossoms lingered during our late summer visit on March 12, but peak bloom was over. However, the expansive views—and the grasses, shimmering in the late afternoon light—compensated for the dearth of flowers.

Terry and I were amazed at how well the Arboretum's New Zealand Forest captures the look and feel of this landscape. Though most of our two-acre forest garden in Seattle is modeled on plant communities found in the mid- to high-elevation zones of the Otago Region, directly south of the Canterbury Region, these two areas are evidently quite similar (with climates roughly matching ours in the Pacific Northwest).



Olearia illicifolia

Plumed tussock grass (*Chionochloa conspicua*), a featured plant in the Arboretum garden, was a dominant species and did sport nice, feathery flower heads. Other grass-like genera in abundance—and also well-represented in the Arboretum display—were spiky *Cordyline*, New Zealand flax (*Phormium*) and *Astelia*.

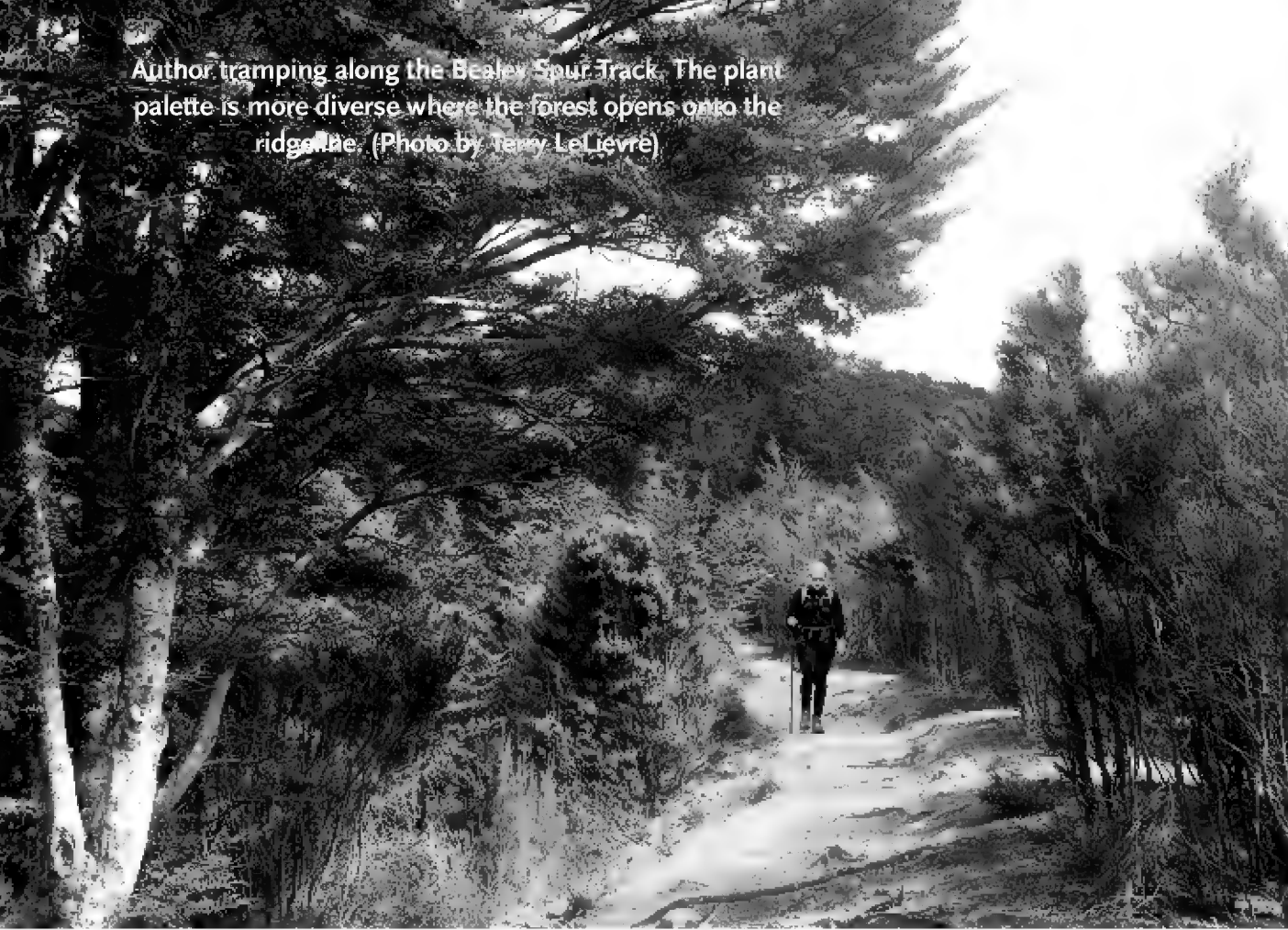
Celery pine (*Phyllocladus alpinus*) was a common shrub. I had become familiar with this odd-looking conifer and its celery leaf-like foliage in the Arboretum, and it was a thrill to be able to identify it in the wild. Daisy-flowering shrubs, such as the endemic mountain-holly (*Olearia illicifolia*), with its serrated gray-green foliage, also abound (four specimens of this species, which the Maori call *hakekeke*, grow in the New Zealand Forest).



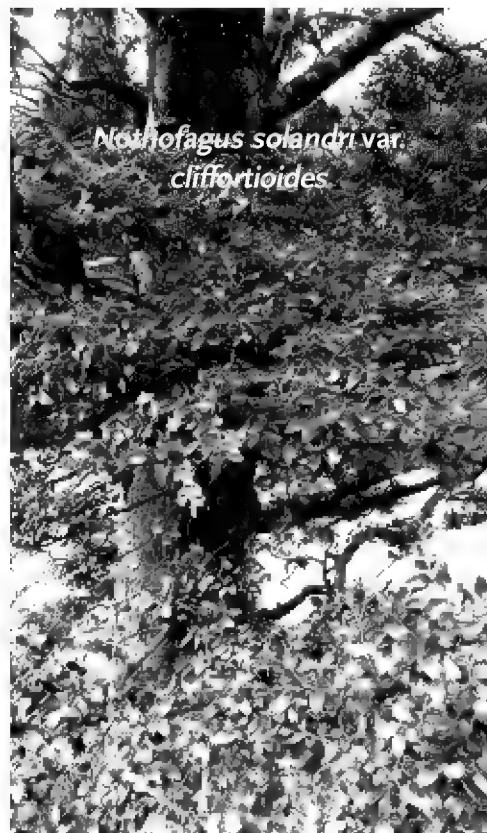
Boxleaf hebe (*Veronica odora*)

And, of course, there were lots of hebes (*Veronica*). With over 130 species, hebe is the largest group of native plants in New Zealand. Several species, including *Veronica subalpina* and boxleaf hebe (*V. odora*), dotted the landscape in the subalpine zone of Arthur's Pass. Both of these evergreen shrubs are also very prominent in the Arboretum collection. The former produces dramatic spikes of white flowers in summer, while the latter has lovely, shiny ovate leaves on yellow-green stems.

Author tramping along the Bealey Spur Track. The plant palette is more diverse where the forest opens onto the ridge line. (Photo by Terry LeCivré)



Pseudopanax colensoi



Nothofagus solandri var. *cliffortioides*

Other interesting shrubs not featured in the Seattle garden included the abundant, broom-like *Dracophyllum subulatum*, the dark-purple-berried *Pseudopanax colensoi*, and the leathery-leaved *Brachyglottis rotundifolia*. (Other species of *Pseudopanax* and *Brachyglottis* are planted in the New Zealand Forest.)



Celmisia semicordata

Perennials included the lovely mountain daisy (*Celmisia semicordata*), which produces big, thick clumps of silvery, sword-shaped leaves and large, white, yellow-centered daisy flowers. (The flowers had already gone to seed, but the fluffy, round seed heads were attractive in their own right.) The plant is difficult to grow in cultivation, and although it was in the Arboretum's original New Zealand collection, it apparently did not thrive.

Bealey Spur Track

Ten miles east of the Dobson Nature Walk, the Bealey Spur Track offered a stark contrast in landscape and flora. To reach the trailhead, we ascended through a neighborhood dotted with cottages and opportunistic plants that thrive in disturbed areas.

Parts of the hills in this drier area were shrouded in mountain beech (*Nothofagus solandri* var. *cliffortioides*), or *tawhai rauriki* in Mauri, the predominant tree in the eastern valleys of Arthur's Pass. It formed a near monoculture, excluding most other trees. Red beech (*Nothofagus fusca*, or *tawhai raunui*) and silver beech (*N. menziesii*, or *tawhai*) are found several miles west of the summit, where rainfall is heavier.

All three southern beech species are elegant trees with handsome, delicate, evergreen foliage. And they can all be seen in the Arboretum display, though only a few (three mature mountain beeches that were transplanted from the High Country Exhibit in late 2013) are tree-sized. I look forward to watching the other young specimens mature and eventually create two

small forest groves within the larger mosaic of alpine, heath and fen plantings.

One plant growing in the understory of the Bealey Spur Track that really caught my eye was lancewood, *Pseudopanax crassifolius*. The adult tree gets up to about 45 feet and has a standard, rounded crown with short, leathery leaves. But the juvenile form, which can persist for up to 20 years, is dramatically different, with stiff, narrow, sharply toothed purple leaves—up to a meter long and radiating down from a narrow trunk. One theory suggests that the plant evolved this juvenile form to protect itself from the browsing of the moa, a large, flightless endemic bird that is now extinct. This tree is not in the Arboretum collection, but I really wish it were!

Evoking a Distant Landscape

Having witnessed the “real deal” for myself, I can confidently say that the New Zealand Forest in the Arboretum does a wonderful job evoking the upland communities on the eastern side of the Southern Alps—not just the colors and textures of the plant palette, but the larger, regional

landscape as well.

The New Zealand Forest is still evolving. As the shrubs and trees in the garden grow and knit together, the drama will increase as well. Arthur’s Pass is almost 7500 miles southwest of the Arboretum, and visiting the area is a privilege not everyone will have the opportunity to enjoy. Strolling through the Arboretum’s New Zealand Forest is the next best thing to being there. ☹

JANINE ANDERSON, CPH, is an award-winning Pacific Northwest-based landscape designer (www.northbeachlandscapes.com), garden writer, speaker and member of the “Bulletin” editorial board.

Acknowledgments

I am grateful to Sean Hogan of Cistus Nursery (www.cistus.com) for assistance with plant identification. Sean’s Portland-area nursery grew the plants for the New Zealand Forest, using seed he and his employees wild-collected on the South Island.



Tussock grasses on the Pisa Flats. (Photo by Kyra Matin)

She collected in the Central Otago and Queenstown Lakes districts (both part of the larger Otago Region), west of Dunedin, and sent back 10,000 seeds from more than 30 different plant species. Some of these seeds have been propagated at Far Reaches Farm, Port Townsend, in preparation for planting in the Arboretum.

Kyra’s thesis, completed in August, is a detailed resource for the development of the New Zealand Forest collection. Through her on-site research, she was able to make recommendations on new plants to add to the garden; specific methods for collecting, cleaning, and storing seeds of New Zealand flora; and future sourcing of seed.

“It also provides detailed information about traditional Maori uses of plants,” says Kyra, “and highlights the opportunity we have to use the New Zealand Forest as a place for sharing indigenous cultural information.” Thanks Kyra! ☹

—Niall Dunne

In February 2019, temporary gardener at the Arboretum Kyra Matin traveled to New Zealand as part of her Masters of Environmental Horticulture thesis project at the UW School of Environmental and Forest Sciences. There, she completed a horticultural internship at the Dunedin Botanic Garden and collected wild, native plant seed for the Arboretum’s New Zealand Forest.

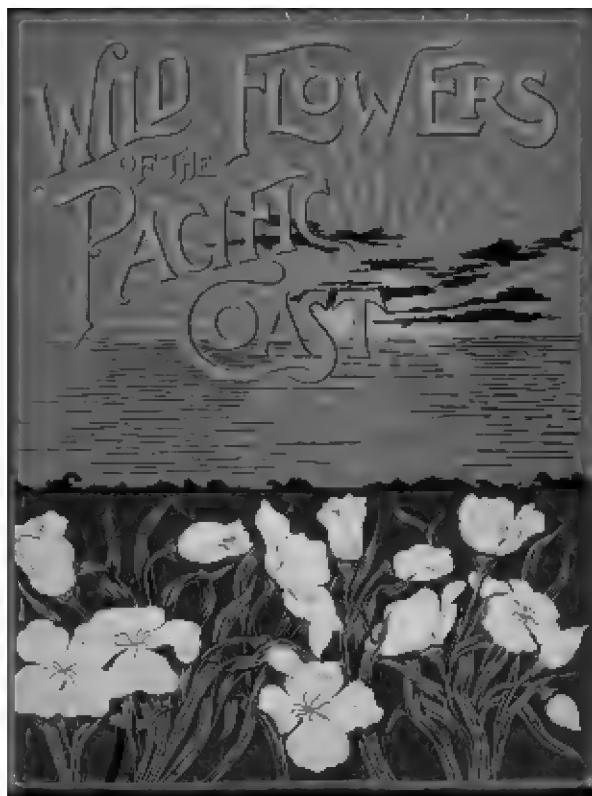
WOMEN BOTANISTS and BOTANICAL ARTISTS

BY BRIAN R. THOMPSON



THIS PAGE RIGHT: Thimbleberry, with mystery grass, by Emma Thayer.

FACING PAGE CENTER: Drawing of *Fremontodendron* by Margaret Buck, from Parsons' field book.



more detailed than that of the flowers. The stories are mostly set in California, but she did make the one visit to Oregon, including a trip by boat from Portland to the mouth of the Columbia River.

In an appendix of “botanical descriptions,” the “fine salmon blossom” is identified as thimbleberry or *Rubus nutkanus*, but the identification of the grass is not attempted. Do readers of the “Bulletin” have any suggestions?

Born in New York, Thayer

Wild Flowers—Pacific Coast

“On the very top of the mound grew this fine salmon blossom, and a few feet away a bed of tall pink grass, the finest I had ever seen. It waved and nodded in the warm breeze, as if inviting me to select its finest bunch to keep company with the pretty white blossoms that had been its neighbors, and from whom it was loth to part company.”

Emma Homan Thayer (1842–1908) wrote these illustrative words, and painted these neighborly plants, while visiting Astoria, Oregon in the 1880s. Her “Wild Flowers of the Pacific Coast” (published in 1887) is the earliest guide to the flora of the West Coast in the Miller Library collection. I hesitate to call it a field guide. Instead, it is a series of short travel essays, each tied to a local wild flower. Often the description of the people Thayer encountered is

went back to school after her first husband died, attending Rutgers and area art institutions. Late in life, she established a reputation as an author of novels. However, it is for this book —and her similar, earlier book on the wild flowers of the Rocky Mountains—that she is best known. While her impressionistic style of illustration lacks the fine detail necessary for certain identification, her books were an introduction, especially for East Coast audiences, to the splendors of the western flora.

Wild Flowers—California

“The Wild Flowers of California: Their Names, Haunts, and Habits” was the earliest (1897) West Coast book published in a recognizable field-guide format. The author of the text, Mary Elizabeth Parsons (1859–1947), hailed from Chicago but spent most of her life in California. She was a keen student of the

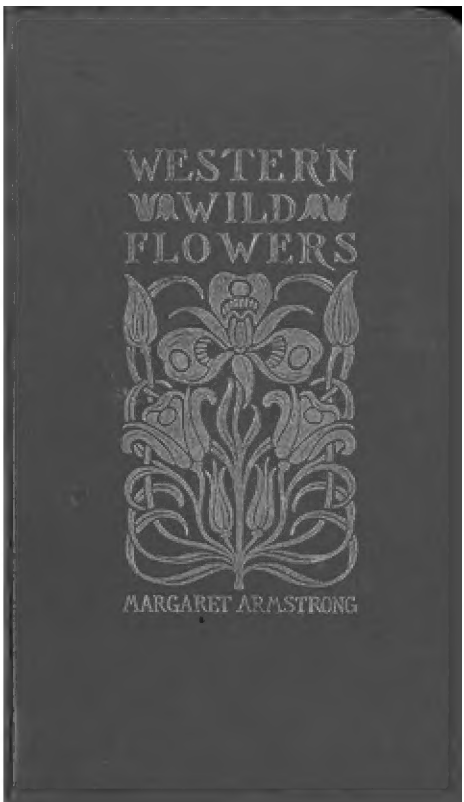
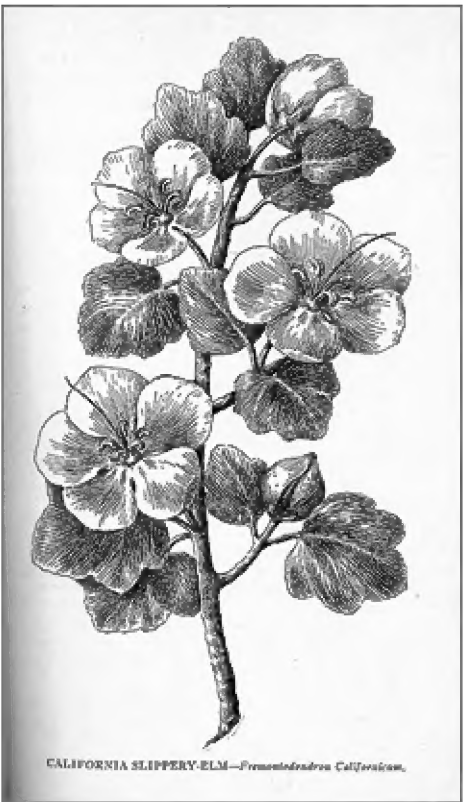
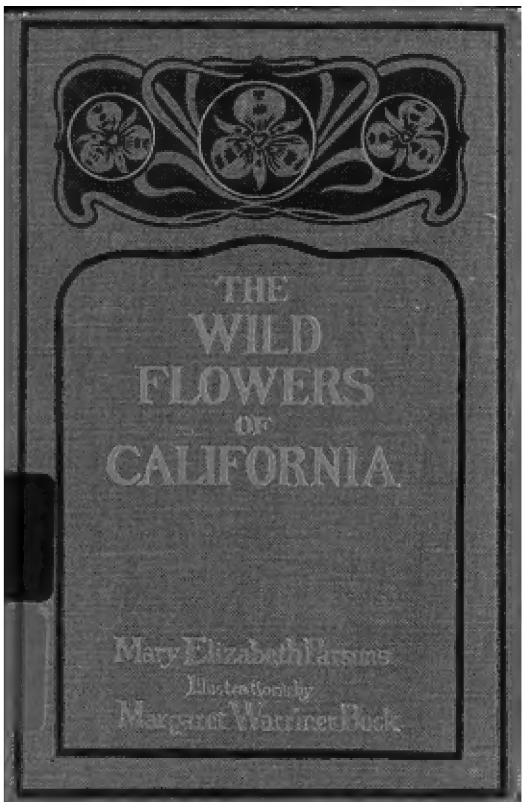
state's botany and studied with noted botanist Alice Eastwood at the California Academy of Sciences in San Francisco.

Her book reflects her scientific discipline by including a "How to Use the Book" introduction, a glossary of botanical terms, and keys to distinguish plant families. She goes on to describe these families—of flowering plants only—with a count of the genera and species known worldwide and in the state at that time. This makes the book a useful time capsule of botanical history.

Wild Flowers—Western North America

"This is the only fully illustrated book of western flowers except Miss Parsons' charming book, which is for California only." This is how Margaret Armstrong (1867–1944) describes her book, "Field Book of Western Wild Flowers" (1915).

Armstrong was from the Hudson River Valley of New York; she explored the West as part of an extended adventure, but never settled here. She traveled from 1911 to 1914, often with two or three female companions, exploring all of the states west of the Rocky Mountains and into Canada. She was possibly the first woman of



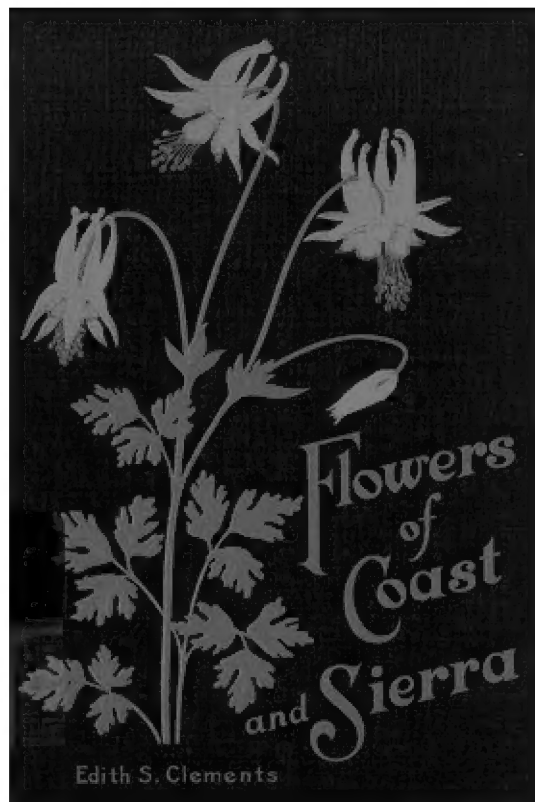
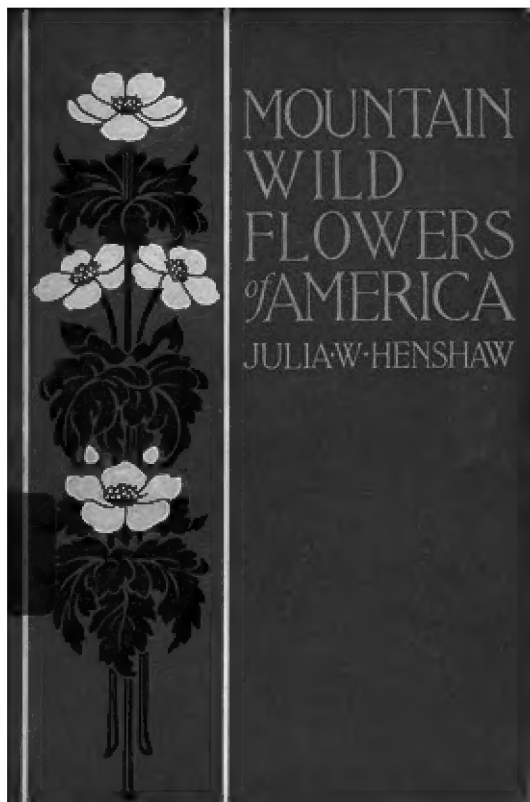
Parsons also studied art, but she asked Margaret Warriner Buck (1857–1929) to illustrate the book and accompany her explorations of the state. With few exceptions, Buck drew her simple but effective pen-and-ink drawings in the field. All these efforts paid off, as the "The Wild Flowers of California" remained a standard reference through several editions into the middle of the 20th century. Later editions included color plates by Buck, also known for her work with "Sunset" magazine during its early years.

Parsons not only brought great attention to detail to her subject, she also captured the joy of being a field botanist. "Every walk into the fields is transformed from an aimless ramble into a joyous, eager quest, and every journey upon state or railroad becomes a rare opportunity for making new plant-acquaintances—a season of exhilarating excitement."

European descent to travel to the floor of the Grand Canyon, where she found, described and illustrated several new plant species.

She had considerable training as an artist and is perhaps best known amongst bibliophiles for the more than 300 book covers she designed—an art form mostly lost in the 20th century with the development of dust jackets. She also wrote biographies in her 60s and mystery novels in her 70s! Her schooling was in art, but she understood botany practices very well, collecting and pressing some 1000 herbarium specimens. Many remain in the New York Botanical Garden Herbarium.

She lists John James Thornber (1872–1962), professor of botany at the University of Arizona, as a co-author of the "Field Book," and credits him and many others (including botanists Alice Eastwood and Julia Henshaw) for assuring the accuracy of her text.



general outdoorswoman” who climbed in the Rockies and mapped much of the interior of Vancouver Island. A strong advocate for participation in World War I, she drove an ambulance at the Western Front in Europe and spoke across Canada of her experience to encourage more involvement in the war effort. She had her indoor pursuits, too, as a theater critic (using Julian Durham as a pseudonym), writing novels, and founding a social club for

“But it is her illustrations that make the book so appealing,” according to Bobbi Angell’s review in the December 2018 issue of “The Botanical Artist.” These include some 500 pen and ink drawings and almost 50 watercolors, all drawn or painted on site. While there is a glossary of terms and a short set of keys, the book relies more on its illustrations for identification than the others in this review.

Wild Flowers—Mountains of North America

Photography was a major innovation for field guides in the early 20th century. Julia W. Henshaw (1869–1937) was an early adopter with her 1906 book “Mountain Wild Flowers of America.” While her title implies inclusion of alpine plants all across Canada and the United States, Henshaw lived in Vancouver, BC and gives special attention to our regional mountains.

Born in England, she studied art in her home country but didn’t take up photography until she moved to British Columbia around 1890. Her images are in a studio setting, in grayscale with a neutral gray background. The guide is ordered by flower color, and it is not too difficult to imagine the appearance of the living plants from the grayscale photos.

Like Thayer, Parsons and Armstrong, Henshaw had abundant energy and a wide variety of interests. Daphne Bramham writes in the “Vancouver Sun” (published September 8, 2014) that Henshaw was “an explorer and

women—the first such society in Vancouver.

Other than the use of photographs, Henshaw’s field guide is very similar in style to the ones described above. Though she wrote it for a general audience, she acknowledges a respectable list of botanists and naturalists as scientific advisors. That said, she is at her best when her descriptions veer towards the subjective. For example, in reference to *Erythronium giganteum* (now *E. grandiflorum* var. *grandiflorum*)—which in Henshaw’s day was burdened with the common name “yellow adder’s tongue” (now “glacier lily”)—she writes, “Late at evening, when beneath the star-sown purple of the sky you return from making some alpine ascent, the pure flames of these wild Lilies gleam in their leafy setting with a pale golden light, and illuminate the green brink of your path.”

Wild Flowers—Coast and Coast Mountains

Another of these intrepid writers and artists was Edith Clements (1874–1971). Her botanical education was the most formal; she received a Ph.D. in botanical ecology from the University of Nebraska and spent her life in various academic and research pursuits, typically in conjunction with her husband, Frederic Clements (1874–1945), who was also a plant ecologist. Together, they published “Rocky Mountain Flowers” in 1914, a botanically detailed flora of the flowering plants, including trees but no conifers or

ferns. This is not a field guide, but the watercolor illustrations by Edith Clements are exquisite—typically showing several plants from the same family together. On her own, she later published “Flowers of Mountain and Plain” (1926), a book for a more general audience using many of the same illustrations.

Willa Cather was a classmate of Frederic and a good friend of Edith, and it’s likely their scientific knowledge influenced the environmental aspects of the novelist’s writing. In an interview by Eleanor Hinman in the “Lincoln Sunday Star” (November 6, 1921), Cather expressed her love of Nebraska wild flowers, concluding, “There is one book that I would rather have produced than all my novels. That is the Clements’ botany dealing with the wild flowers of the west.”

I think Edith saved her best work for West Coast readers in “Flowers of Coast and Sierra” (1928), which includes the mountain ranges of Oregon and Washington. She was self-taught as an artist and comfortable driving throughout the West to paint from living specimens. While clearly steeped in botanical knowledge, she sought to reach a general audience with both her art and writing. Like Julia Henshaw, she was also impressed with the glacier lily, saying these “will

spring up by the thousand and carpet the earth with smooth green leaves which can scarcely be seen for the myriad bright-yellow blossoms nodding above. On the slopes of Mount Rainier, they unite with the white avalanche-lily (*E. montanum*) in turning the scene into fairyland.”

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